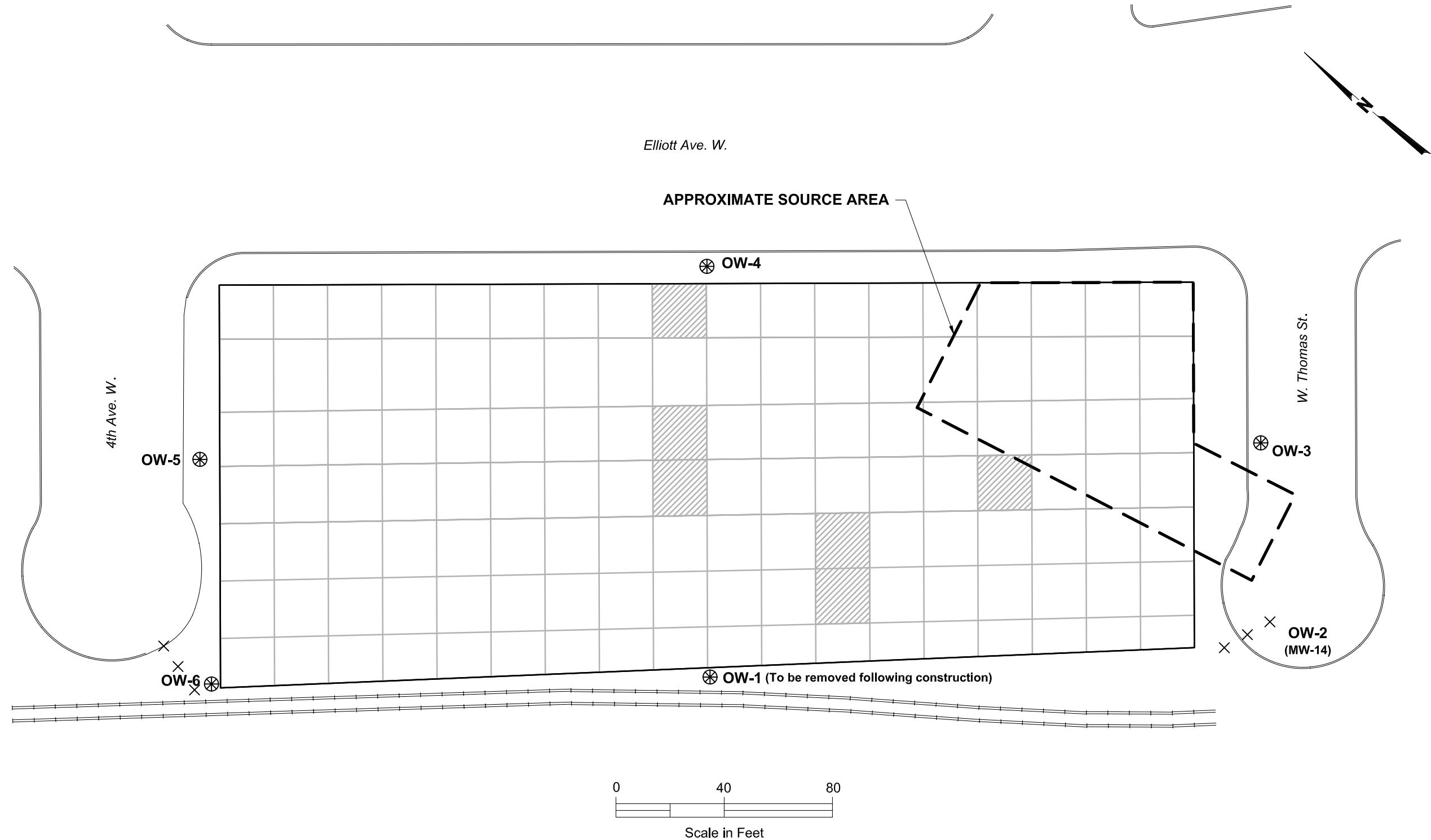


File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 2.dwg Date: 07-07-2006 Author: draftmp



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333 Elliott Avenue West
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**EXCAVATION PLAN
0 TO 5 FEET
BELOW GROUND SURFACE**

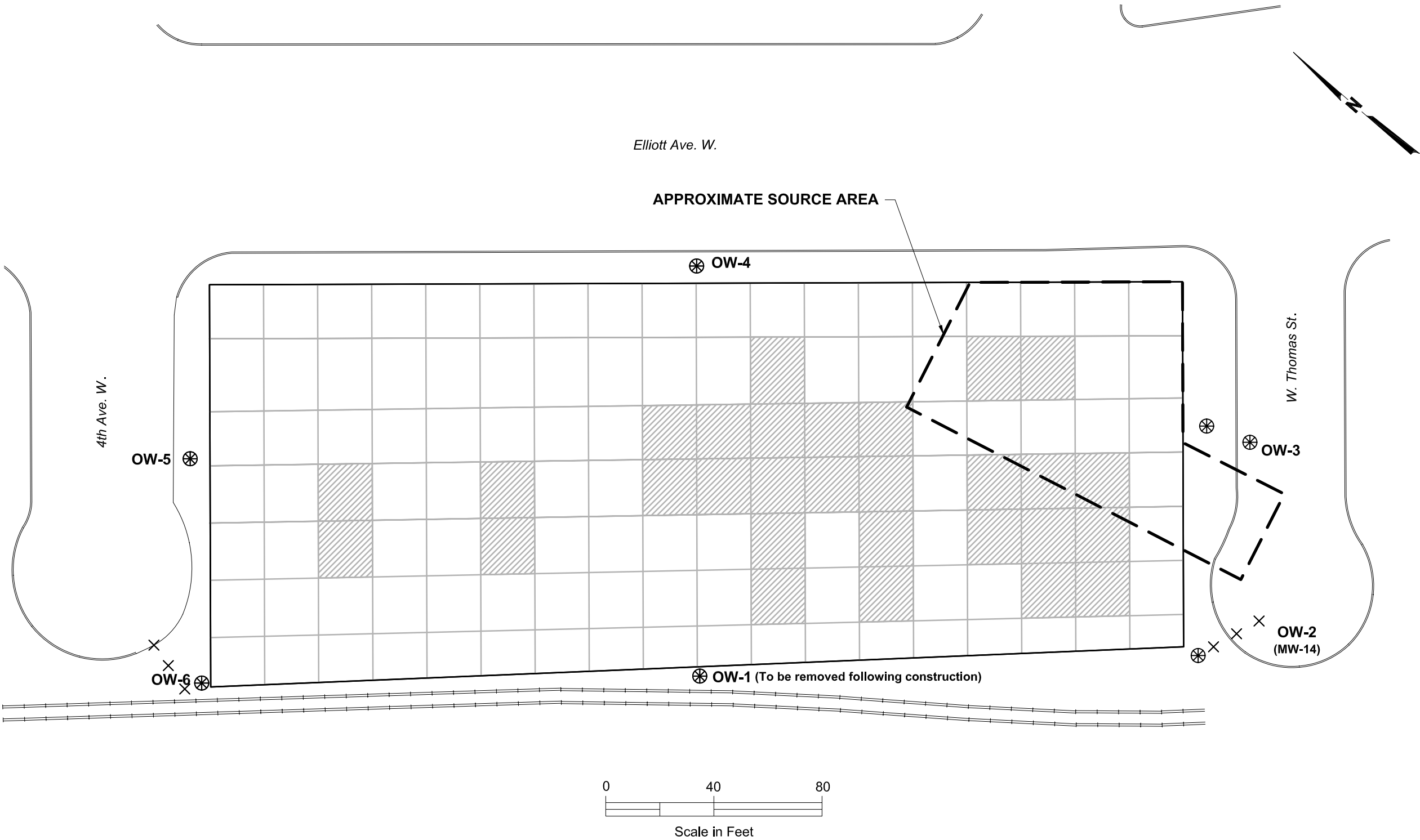
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FIG. 2
Sheet 1 of 10

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NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

X Recharge Well

LEGEND

- No Known Contamination (No Information Available)
- Contaminated Soil Containing <1% Naphthalene
- Soil Containing 1% to 10% Naphthalene
- Soil Containing >10% Naphthalene

Engineering Design Report
333 Elliott Avenue West
Seattle, Washington

**EXCAVATION PLAN
5 TO 10 FEET
BELOW GROUND SURFACE**

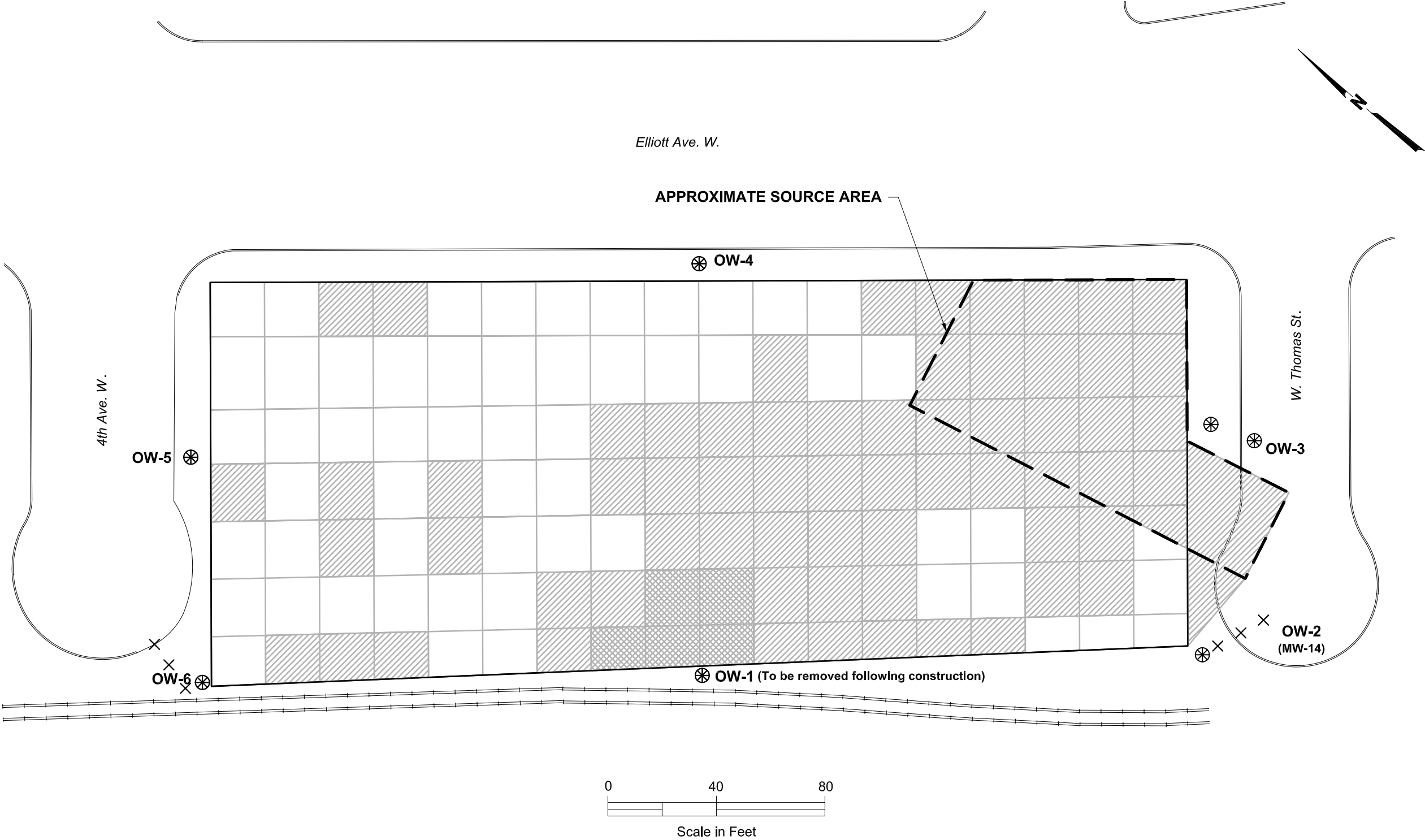
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FIG. 2
Sheet 2 of 10

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NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

X Recharge Well

LEGEND

- No Known Contamination (No Information Available)
- Contaminated Soil Containing <1% Naphthalene
- Soil Containing 1% to 10% Naphthalene
- Soil Containing >10% Naphthalene

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333 Elliott Avenue West
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**EXCAVATION PLAN
10 TO 15 FEET
BELOW GROUND SURFACE**

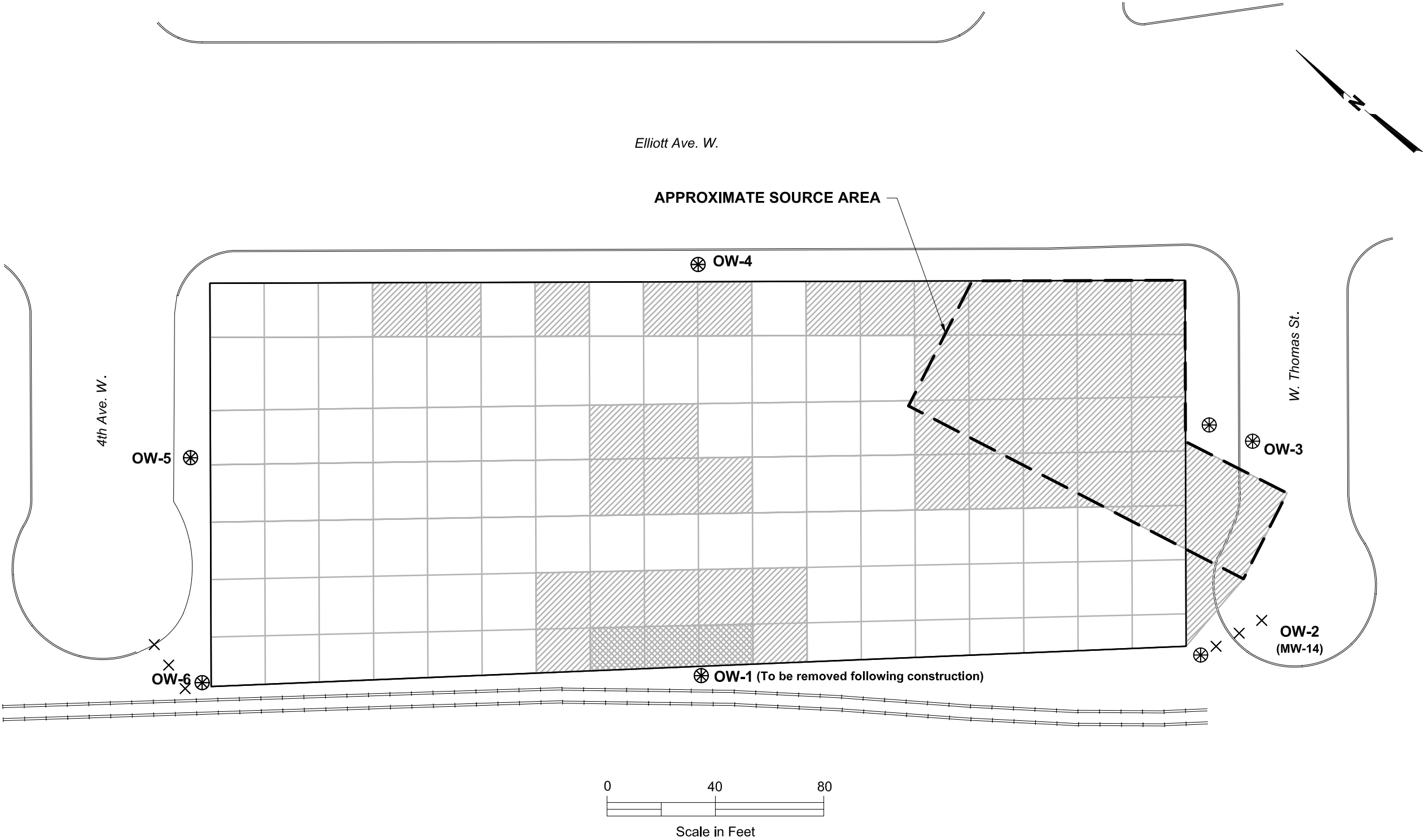
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FIG. 2
Sheet 3 of 10

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 2.dwg Date: 07-07-2006 Author: draftmp



NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

Recharge Well

LEGEND

- No Known Contamination (No Information Available)
- Contaminated Soil Containing <1% Naphthalene
- Soil Containing 1% to 10% Naphthalene
- Soil Containing >10% Naphthalene

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333 Elliott Avenue West
Seattle, Washington

**EXCAVATION PLAN
15 TO 18 FEET
BELOW GROUND SURFACE**

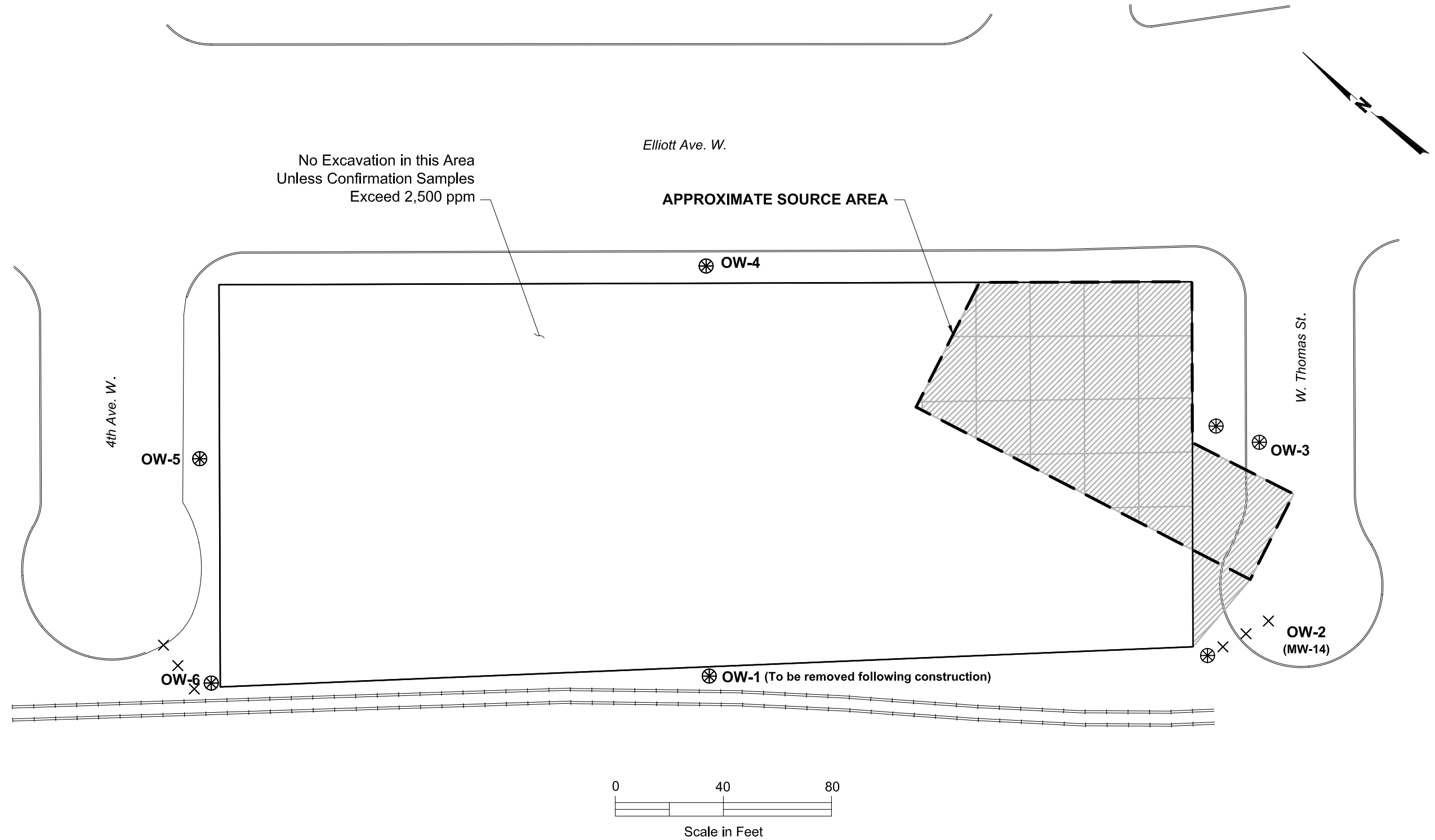
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FIG. 2
Sheet 4 of 10

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 2.dwg Date: 07-07-2006 Author: draftemp



NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

Recharge Well

LEGEND

- No Known Contamination (No Information Available)
- Contaminated Soil Containing <1% Naphthalene
- Soil Containing 1% to 10% Naphthalene
- Soil Containing >10% Naphthalene

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**EXCAVATION PLAN
18 TO 20 FEET
BELOW GROUND SURFACE**

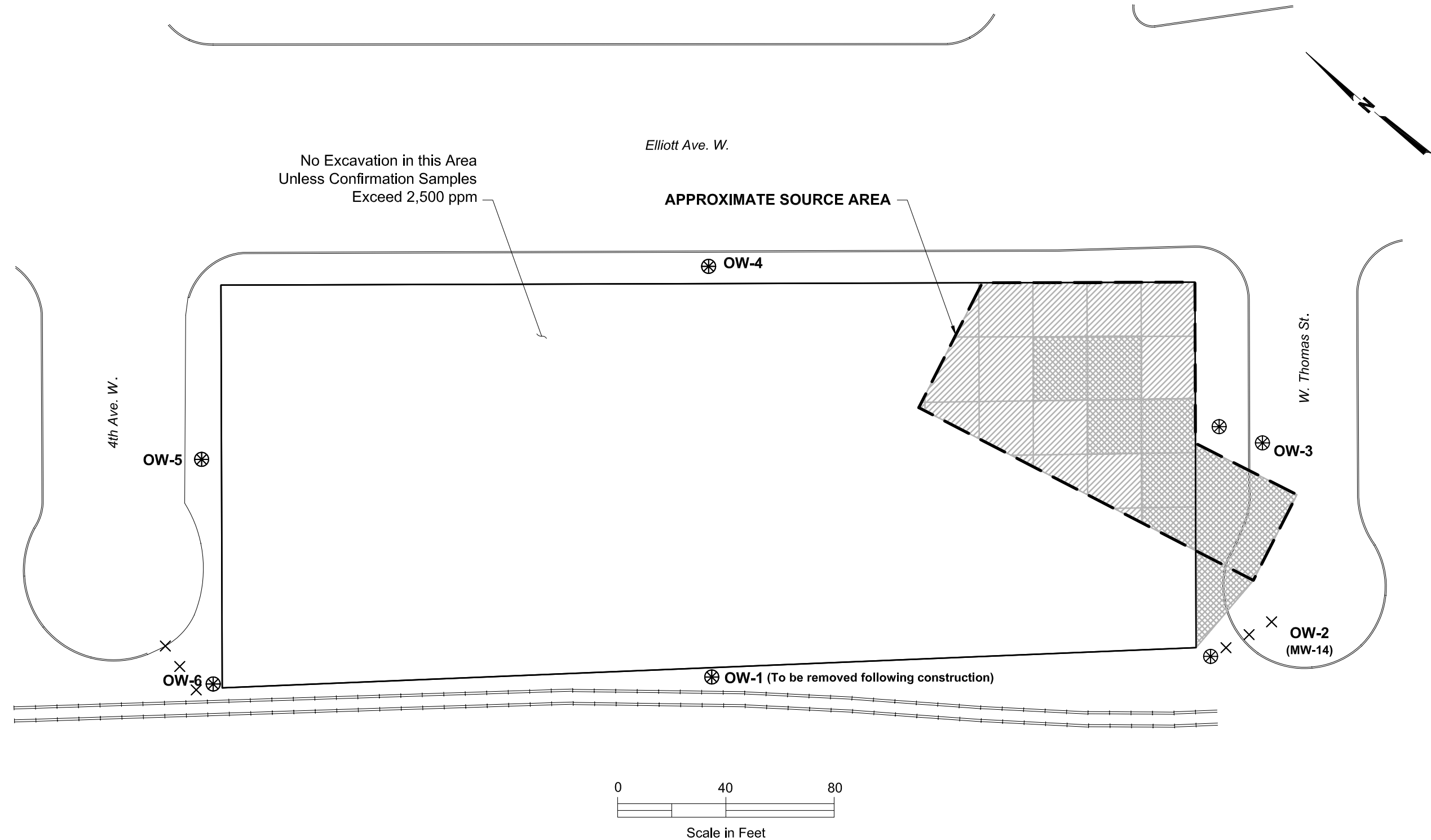
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FIG. 2
Sheet 5 of 10

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NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

Recharge Well

LEGEND

- | | |
|--|---|
| | No Known Contamination (No Information Available) |
| | Contaminated Soil Containing <1% Naphthalene |
| | Soil Containing 1% to 10% Naphthalene |
| | Soil Containing >10% Naphthalene |

Engineering Design Report
333 Elliott Avenue West
Seattle, Washington

**EXCAVATION PLAN
20 TO 22 FEET
BELOW GROUND SURFACE**

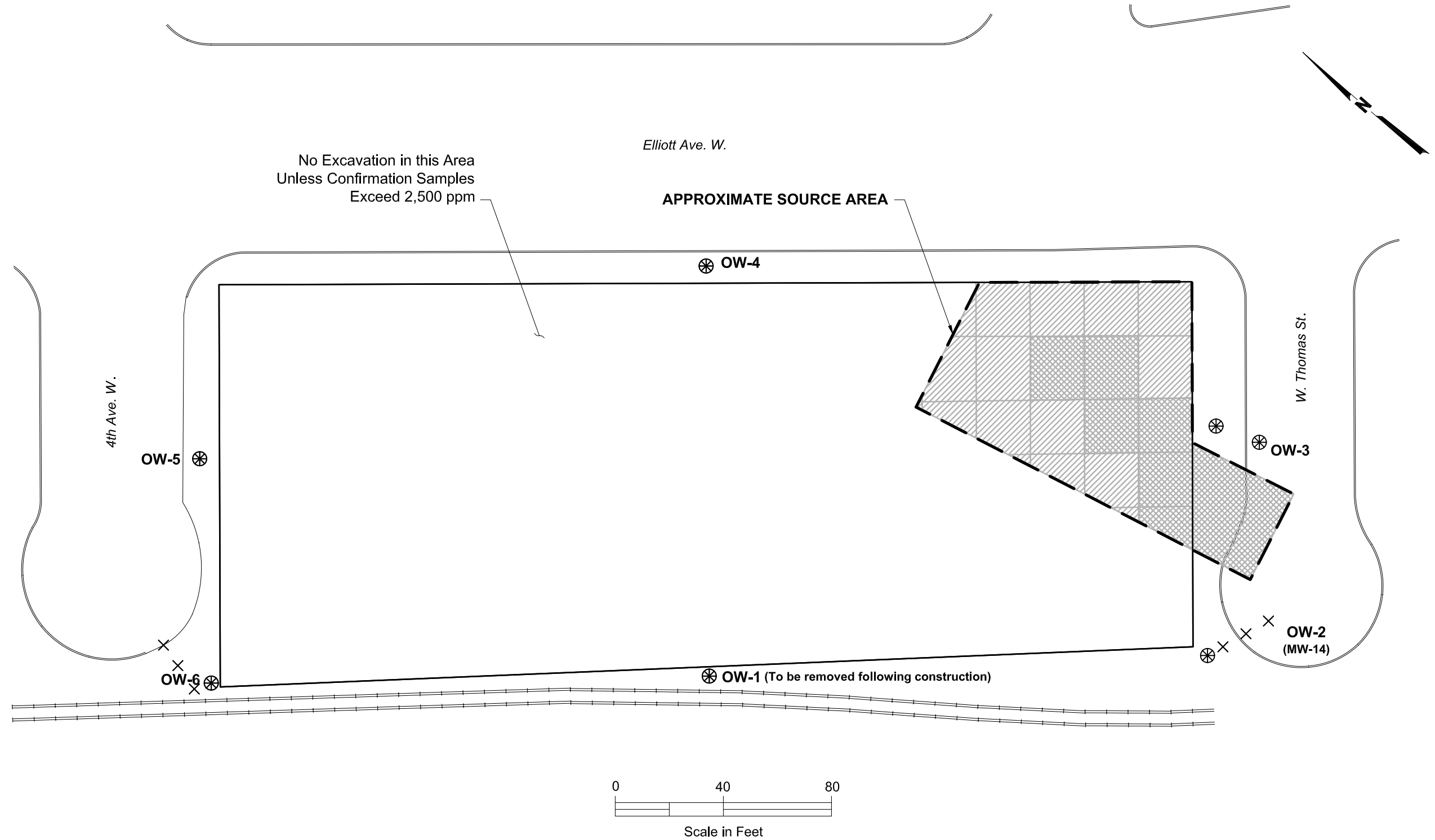
July 2006

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FIG. 2
Sheet 6 of 10

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 2.dwg Date: 07-07-2006 Author: draftemp



NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

Recharge Well

LEGEND

- No Known Contamination (No Information Available)
- Contaminated Soil Containing <1% Naphthalene
- Soil Containing 1% to 10% Naphthalene
- Soil Containing >10% Naphthalene

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Seattle, Washington

**EXCAVATION PLAN
22 TO 24 FEET
BELOW GROUND SURFACE**

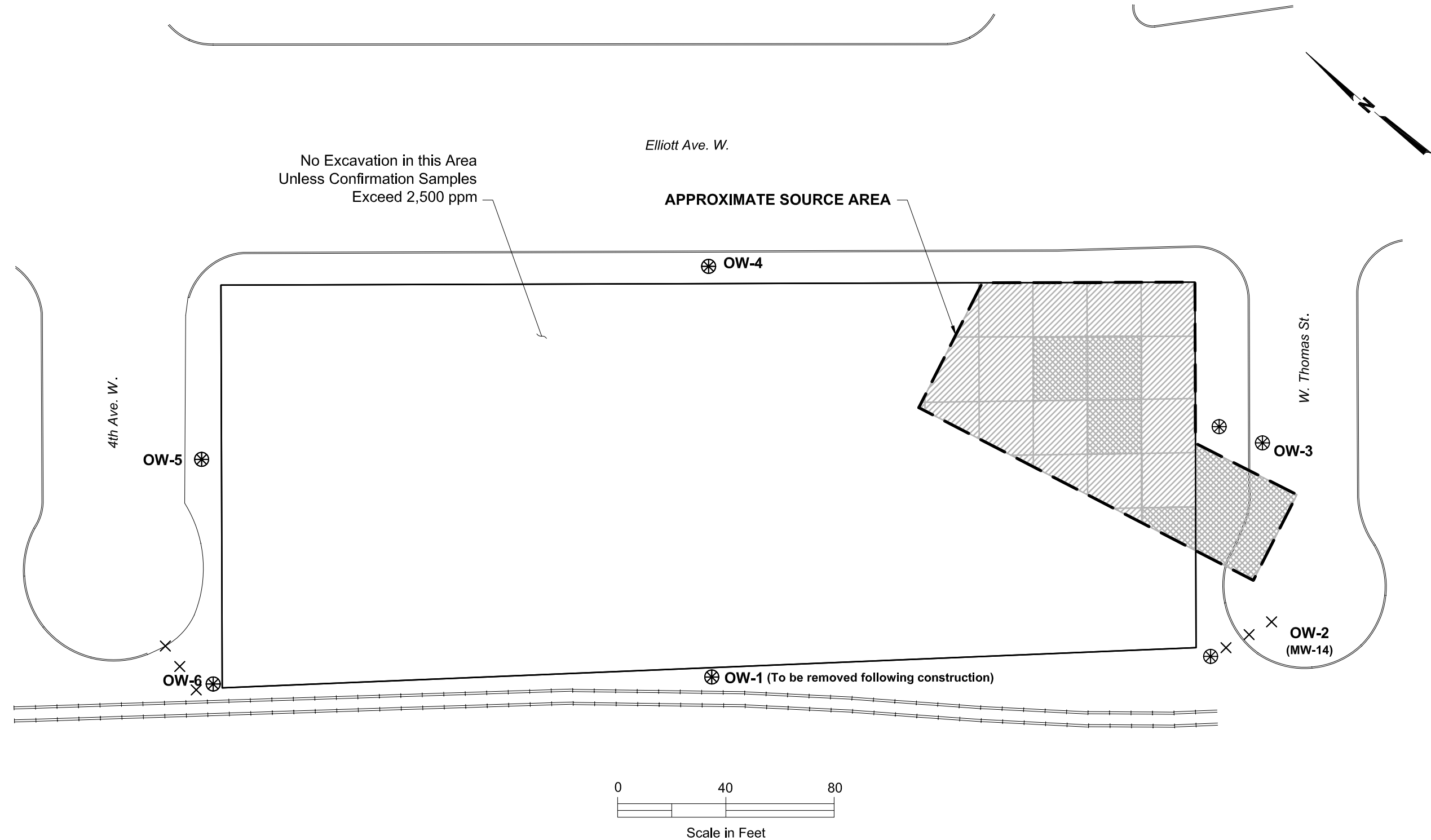
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FIG. 2
Sheet 7 of 10

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 2.dwg Date: 07-07-2006 Author: draftemp



NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

Recharge Well

LEGEND

- | | |
|--|---|
| | No Known Contamination (No Information Available) |
| | Contaminated Soil Containing <1% Naphthalene |
| | Soil Containing 1% to 10% Naphthalene |
| | Soil Containing >10% Naphthalene |

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Seattle, Washington

**EXCAVATION PLAN
24 TO 26 FEET
BELOW GROUND SURFACE**

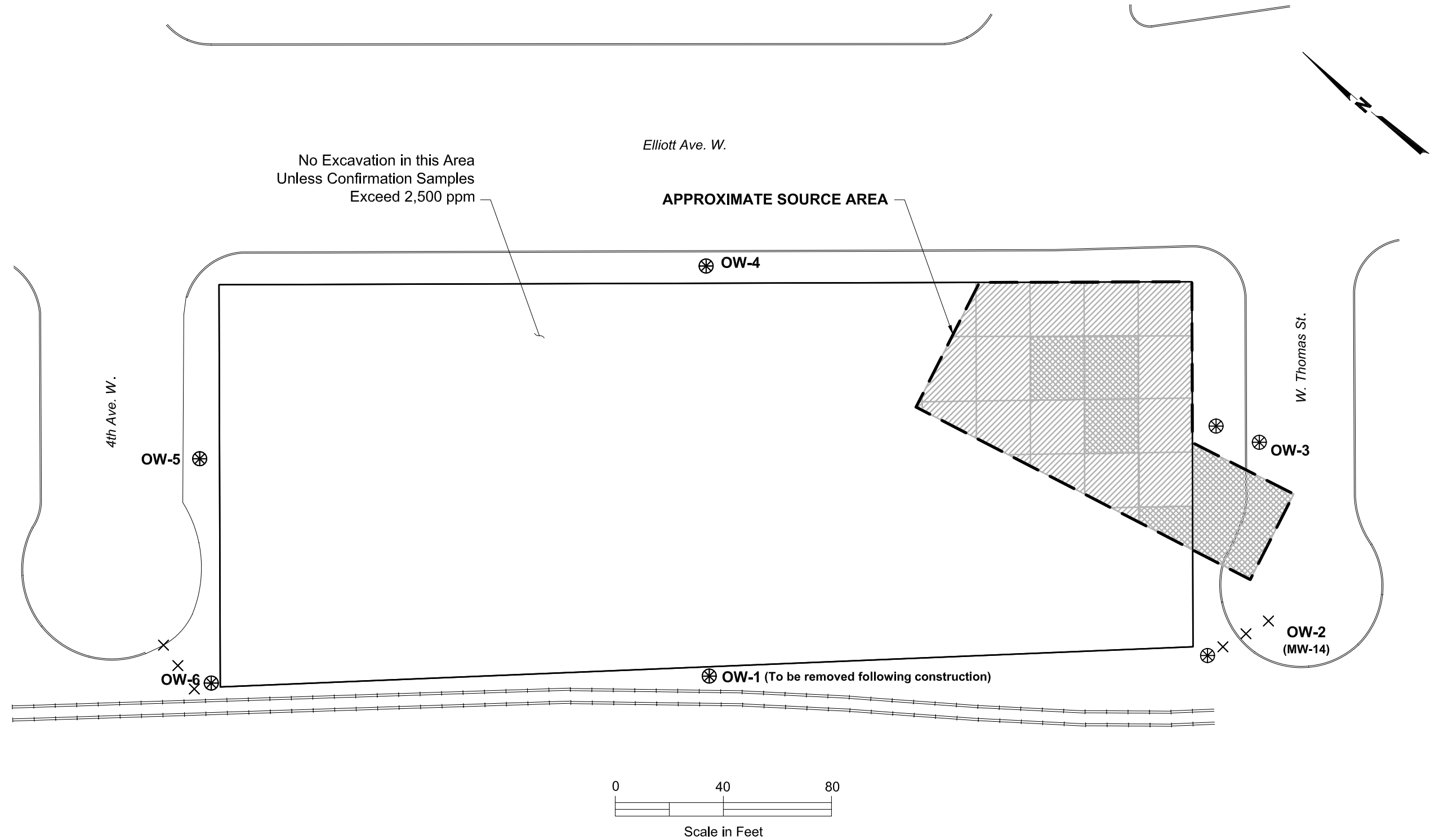
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FIG. 2
Sheet 8 of 10

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 2.dwg Date: 07-07-2006 Author: draftemp



NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

× Recharge Well

LEGEND

- No Known Contamination (No Information Available)
- Contaminated Soil Containing <1% Naphthalene
- Soil Containing 1% to 10% Naphthalene
- Soil Containing >10% Naphthalene

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Seattle, Washington

**EXCAVATION PLAN
26 TO 28 FEET
BELOW GROUND SURFACE**

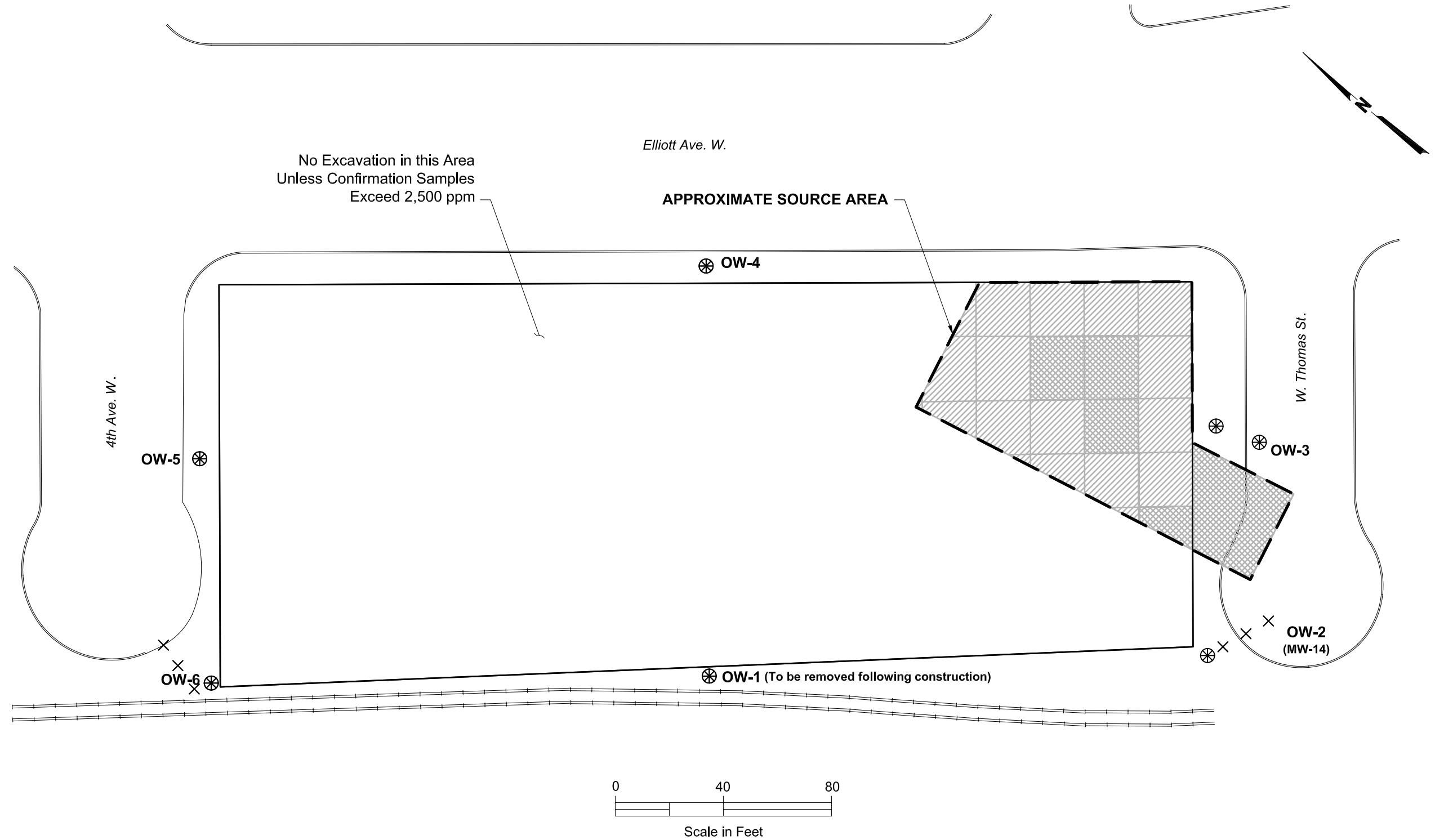
July 2006

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FIG. 2
Sheet 9 of 10

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NOTE

Extents of Contamination extrapolated from existing data. Actual conditions to be field verified.

OW-1

Observation Well Designation and Approximate Location (Actual Location Dependent on Construction Space Restrictions)

Recharge Well

LEGEND

- No Known Contamination (No Information Available)
- Contaminated Soil Containing <1% Naphthalene
- Soil Containing 1% to 10% Naphthalene
- Soil Containing >10% Naphthalene

Engineering Design Report
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Seattle, Washington

**EXCAVATION PLAN
28 TO 30 FEET
BELOW GROUND SURFACE**

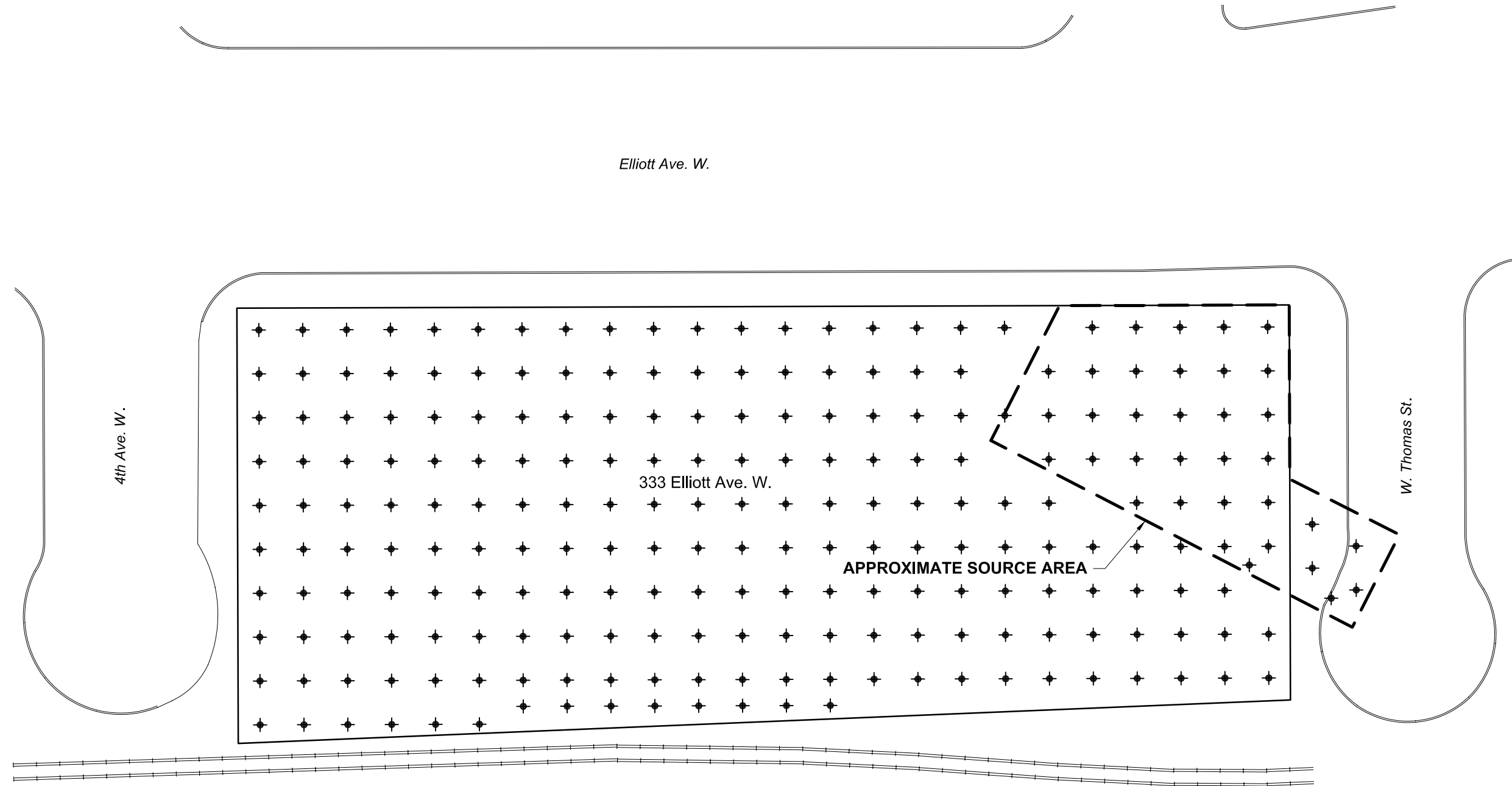
July 2006

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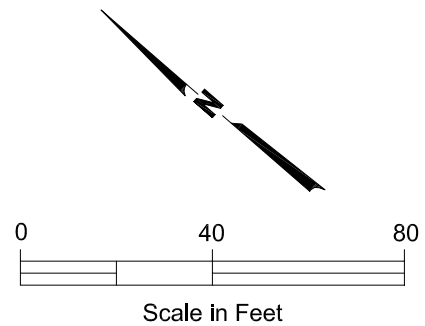
FIG. 2
Sheet 10 of 10

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 3.dwg Date: 07-07-2006 Author: draftemp



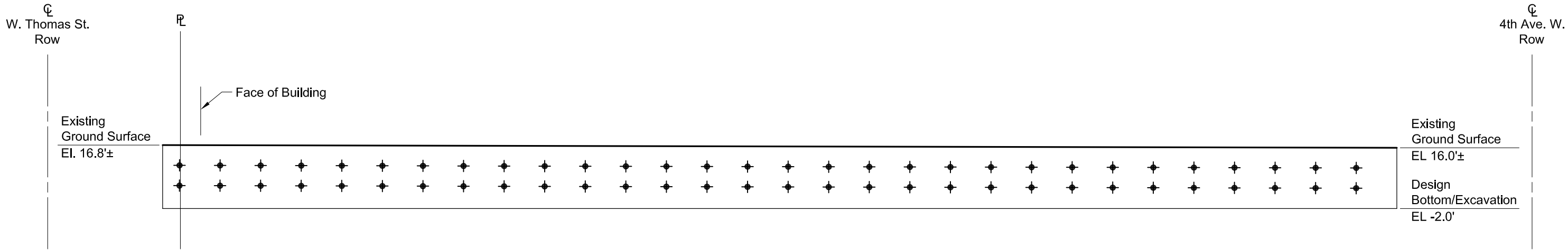
LEGEND

✦ Approximate Excavation Bottom
Confirmation Soil Sample Location

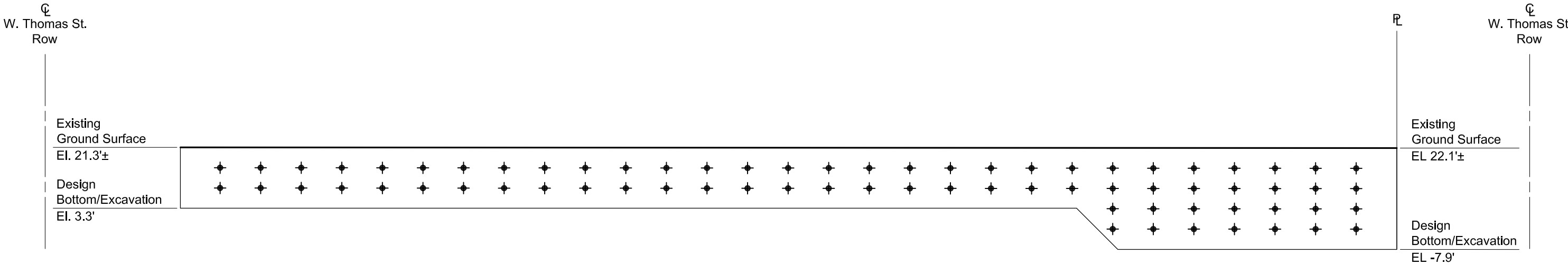


Engineering Design Report 333 Elliott Avenue West Seattle, Washington	
EXCAVATION BOTTOM CONFIRMATION SAMPLE LOCATIONS	
July 2006	21-1-20198-003
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	FIG. 3

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Figs 4 and 5.dwg Date: 07-07-2006 Author: draftemp



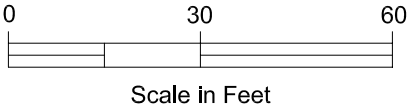
WEST SHORING WALL ELEVATIONS



EAST SHORING WALL ELEVATIONS

LEGEND

⊕ Approximate Excavation Sidewall Confirmation Soil Sample Location

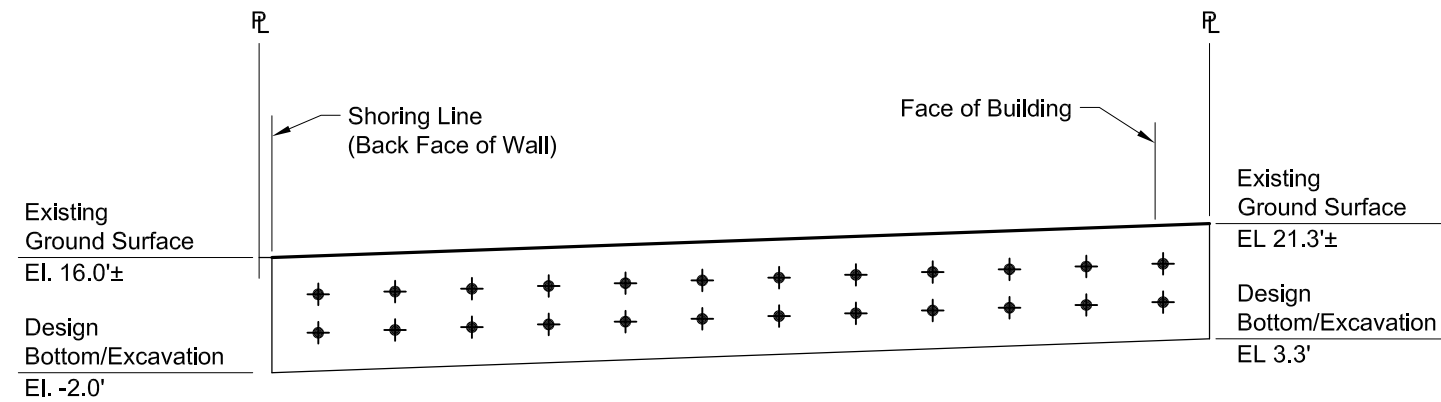


NOTE

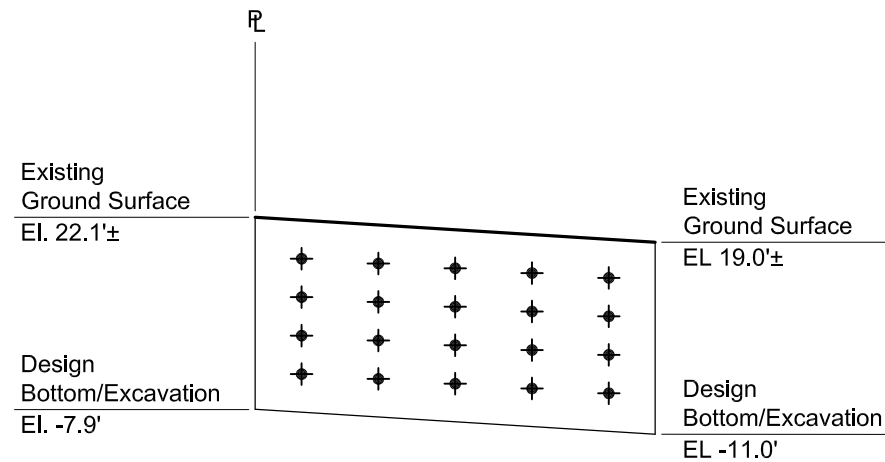
Design b/excavation indicates bottom of excavation assumed for design of the shoring. Actual bottom of excavation shall be determined by the contractor based on footing elevations and dimensions. Actual bottom of excavation may be higher than design b/excavation at some locations.

Engineering Design Report 333 Elliott Avenue West Seattle, Washington	
EXCAVATION EAST AND WEST SIDEWALLS CONFIRMATION SAMPLE LOCATIONS	
July 2006	21-1-20198-003
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	FIG. 4

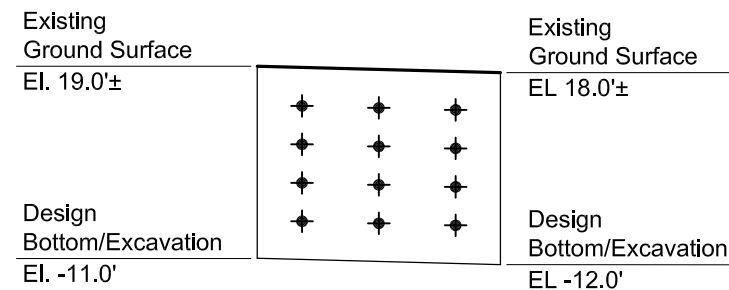
File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Figs 4 and 5.dwg Date: 07-07-2006 Author: drafttemp



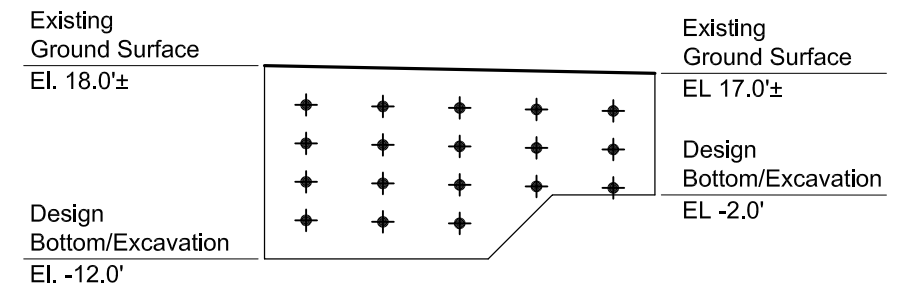
NORTH SHORING WALL ELEVATION C



SOUTH SHORING WALL ELEVATION D



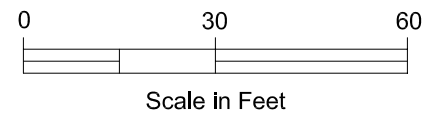
SOUTH SHORING WALL ELEVATION E



SOUTH SHORING WALL ELEVATION F

LEGEND

✦ Approximate Excavation Sidewall Confirmation Soil Sample Location

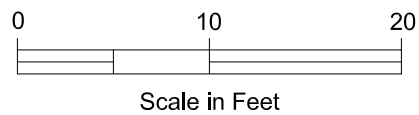
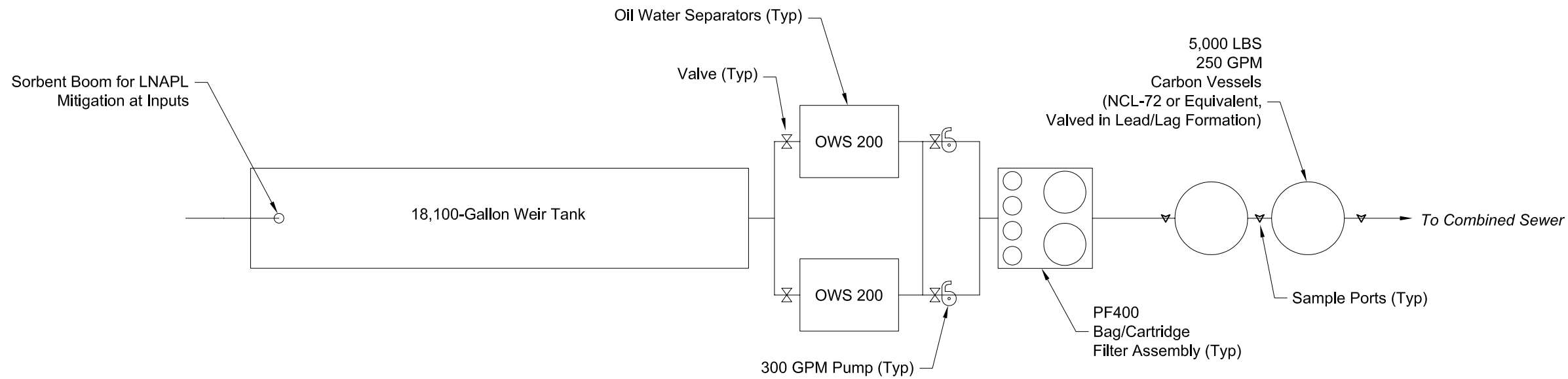


NOTE

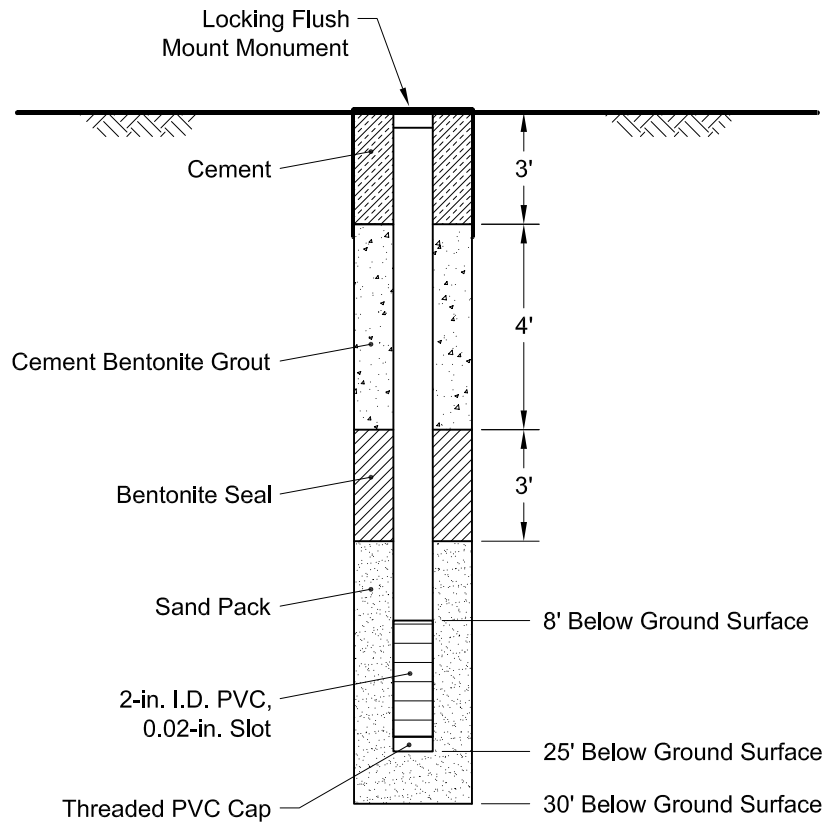
Design b/excavation indicates bottom of excavation assumed for design of the shoring. Actual bottom of excavation shall be determined by the contractor based on footing elevations and dimensions. Actual bottom of excavation may be higher than design b/excavation at some locations.

Engineering Design Report 333 Elliott Avenue West Seattle, Washington	
EXCAVATION NORTH AND SOUTH SIDEWALLS CONFIRMATION SAMPLE LOCATIONS	
July 2006	21-1-20198-003
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	FIG. 5

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 6.dwg Date: 07-07-2006 Author: draftemp



Engineering Design Report 333 Elliott Avenue West Seattle, Washington	
WATER TREATMENT SYSTEM SCHEMATIC	
July 2006	21-1-20198-003
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	FIG. 6

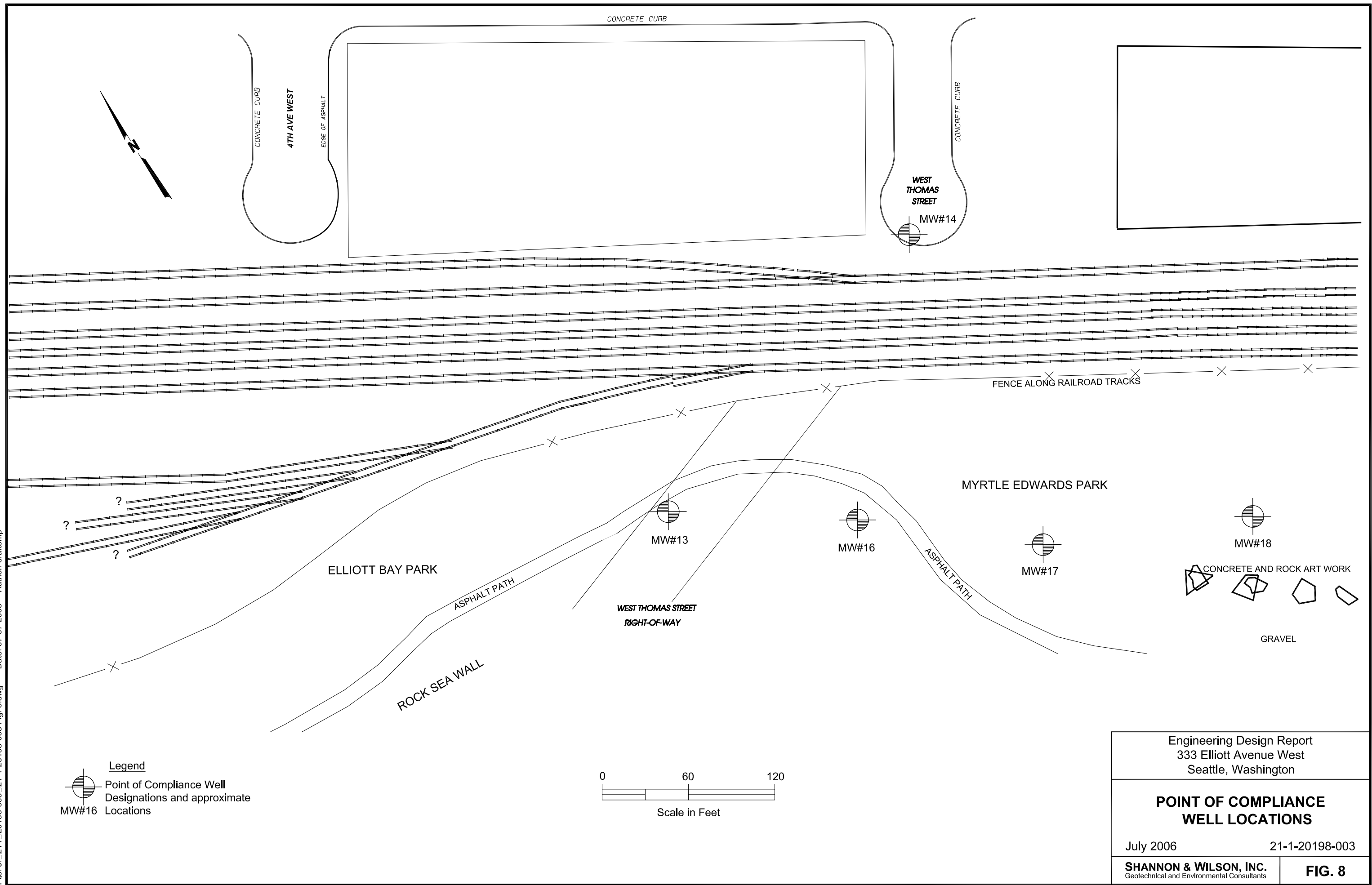


Not to Scale

File: J:\211\20198-003\June 2006 Draft Report\21-1-20198-003 Fig 7.dwg Date: 07-07-2006 Author: draftemp

Design Engineering Report 333 Elliott Avenue West Seattle, Washington	
OBSERVATION WELL TYPICAL CONSTRUCTION	
June 2006	21-1-20198-003
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	FIG. 7

File: J:\211\20198-003\21-1-20198-003 Fig. 8.dwg Date: 07-07-2006 Author: draftmp



APPENDIX A
SHORING PLAN

SHORING DRAWINGS

GENERAL SHORING NOTES

Code Requirements: All design and construction shall conform to the requirements of the International Building Code, 2003 Edition, as amended by the City of Seattle.

Reference Documents:

- Geotechnical Report by Shannon & Wilson, Inc., dated June 10, 2005.
- "Recommendations for Prestressed Rock and Soil Anchors" by the Post-Tensioning Institute, latest edition.
- CSHA and WSHA Standards.
- Geotechnical Memorandum by Shannon & Wilson, Inc., dated March 28, 2006.

Design Loads: The recommendations for lateral soil pressures provided in the Geotechnical Report were used for design.

Submittals: Shop drawings shall be submitted to the Architect prior to any fabrication or construction for all structural items including structural steel and miscellaneous metal. Mix designs shall be submitted to the Architect for all concretes and grouts. Shoring monitoring results shall be submitted to the Architect, Engineer and Geotechnical Engineer on at least a weekly basis.

Inspection: Inspection by a qualified Geotechnical Engineer or independent Testing Lab will be provided by Owner for pile installation, tieback installation and stressing and welding.

Special Conditions: Contractor shall verify all dimensions of existing structures in the field and shall notify the Architect of all field changes prior to fabrication and installation.

Crack Survey: Prior to construction, the Contractor shall complete a written and photographic log of all existing structures as described in the specification. A licensed surveyor shall document all existing substantial cracks in adjacent streets, sidewalks and existing structures.

Utility Location: The Contractor shall utilize the services of the "Utility Locator Service" (1-800-424-5555) to verify the extent and locations of site utilities. If the actual field verified location of utilities could result in a conflict with the shoring, the Engineer shall be notified immediately.

Prior to construction, Contractor shall verify that overhead obstructions, including electrical lines, do not interfere with use of the Contractor's drilling equipment.

Concrete: Concrete work shall conform to all requirements of Chapter 19 of the International Building Code. Concrete strengths shall be verified by 28-day standard cylinder tests, unless approved otherwise. Grout strengths shall be verified by 2-inch cube tests per ASTM C109. Concrete mixes shall be as follows:

Minimum to (psi)	Cement Per Cubic Yard	Use
3000	4 sacks	Pile structural concrete
1 1/2 sacks		Pile lean concrete, secant piles

Admixtures that weaken the concrete mix shall not be allowed.

As an alternative to the above, the Contractor shall submit concrete mix designs to the Engineer for approval two weeks prior to placing any concrete. The alternate mix design will be reviewed for conformance to IBC Chapter 19.

Grout: Tieback grout shall be neat cement with a minimum of nine 94-pound sacks of cement per cubic yard of grout.

Prestressing Steel: Uncoated Seven Wire Stress Relieved Strand ASTM 270 shall conform to ASTM A416. Steel Thread Bar Grade 150 shall conform to ASTM A 722.

Steel Reference Specifications: Design, fabrication and erection shall be in accordance with the following specifications:

Structural Steel	— AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, 9th Edition
Welding	— AWS D11, —2000 AWS prequalified joint details
Welder Certification	— Washington Association of Building Officials (WABO)

Steel Materials:

Reinforcing steel	— ASTM A 615, Grade 60
Structural steel (except as noted below)	— ASTM A 36 UNO
Structural steel W12 & larger	— ASTM A 992, Grade 50
Connection material, angles, plates, and misc. steel	— ASTM A 36 UNO
Welding electrodes	— E70XX UNO
Pipes	— ASTM A 53, Grade B
Structural Tubes	— ASTM A 500, Grade B
Bolts	— ASTM A 307 UNO

Sawn Lumber: Sawn lumber shall conform to "Grading and Dressing Rules," West Coast Lumber Inspection Bureau (WCLIB), latest edition. Lumber shall be one of the two grades listed below.

Use	Grade	Fb(psi) (base values)
4x — Timber Lagging	Douglas Fir—Larch No. 2	900
	Hem—Fir No. 1	975

Timber lagging shall be pressure-treated with waterborne preservatives in accordance with AWPB LP-22 to a minimum retention of 0.4 lbs./cu. ft. Lagging shall be rough cut.

SHORING PROCEDURE

Verification: Dimensions and location of existing structures shall be verified prior to fabrication and installation of any structural member. Notify the Engineer about any discrepancies in dimensions.

Hole Drilling: Pile and anchor holes shall be drilled without loss of ground and without endangering previously installed piles and anchors. The geotechnical report recommends the use of casing to prevent collapse of the drilled hole in loose soils and soils that are below the groundwater level. See the geotechnical report for possible obstructions.

Excavation Below Tiebacks: Tieback installation and stressing shall be completed prior to excavating more than 1 foot below centerline of anchor level at the west wall and 2 feet below the centerline of anchor level at all other walls.

Shoring Removal:

Cut off and/or remove all components of shoring wall in City Right-of-Way 4 feet below grade following construction. Destress all tiebacks after concrete floor and walls above have attained design strength and after obtaining approval from the Engineer. See N/SH-5 and P/SH-5 for special tieback destressing procedure for the south wall.

Lagging: Timber lagging shall be installed at the north, south and east shoring walls. Voids between lagging and soil shall be backfilled immediately after lagging installation using a free draining backfill material selected by the Shoring Contractor. Drainage behind the wall must be maintained. It is the Contractor's responsibility to limit the amount of exposed soil without lagging to avoid loss of soil. Excavation to install lagging below the ground shall be limited to 3 feet.

TIEBACK STRESSING AND TESTING

Performance and proof tests shall be conducted on the tiebacks in accordance with Reference 2. Portions of these recommendations are outlined as follows:

Performance Tests

- Prior to installing production anchors within a particular soil stratum, a performance test shall be accomplished for each anchor type and/or installation method that will be used. Approximately 3 percent of the production anchors, selected by the Geotechnical Engineer shall be performance tested by cyclical loading in 25 percent increments to 200 percent of design capacity. The 200 percent load shall be held for a minimum of 60 minutes. Successful 200 percent test anchors may be utilized as production tiebacks.
- The performance test shall consist of recording the load and deflection measurements over a series of load cycles. The testing procedure and load increments recommended in Reference 2 shall be used for the performance test. The final maximum test load shall be maintained for at least 60 minutes.
- The maximum stress in the prestressing steel shall not exceed 80 percent of the guaranteed ultimate tensile strength (GUTS) during performance testing. Piles and tiebacks may require extra reinforcement to permit stressing to 200 percent of the design load as required by the performance test.
- A successful performance test shall meet the following criteria:
 - Exhibit a near linear relationship between load and movement over the 200 percent test range.
 - The creep rate does not exceed 0.080 inches/log cycle time during the final log cycle of the performance test.
 - The total elastic movement exceeds 80 percent of the theoretical elastic elongation of the free stressing length.

Test results from anchors not meeting these criteria shall be reviewed by the Geotechnical Engineer and the Engineer to determine if a replacement anchor is required.

Proof Test of Production Anchors

- Each production anchor shall be proof-tested to 133 percent of the design load.
- A proof test shall consist of incrementally loading an anchor to 133 of the design load. The testing procedure and load increments recommended in Reference 2 shall be used for the proof test.
- A successful proof test shall meet the following criteria:
 - Exhibit a near linear relationship between load and movement over the 133 percent test range.
 - The creep rate does not exceed 0.04 inches for the 10 minute hold period of the final load increment.
 - The total elastic movement exceeds 80 percent of the theoretical elastic elongation of the free stressing length.

Test results from anchors not meeting these criteria shall be reviewed by the Geotechnical Engineer and the Engineer to determine if a replacement anchor is required.

- Following successful proof loading, each anchor shall be locked-off at 80 percent of design loading required.
- The maximum stress in prestressing steel shall not exceed 60 percent of the ultimate tensile strength at the design loads.

Jacking and Test Apparatus

- The anchor load shall be measured with a pressure gage calibrated with the jack and accurate enough to read 100 psi changes in pressure. The pump shall be capable of applying each load increment for performance and proof tests in less than 60 seconds.
- The movement of the anchor during testing shall be recorded to the nearest 0.001 inches.

Pile Bracing for Tieback Testing

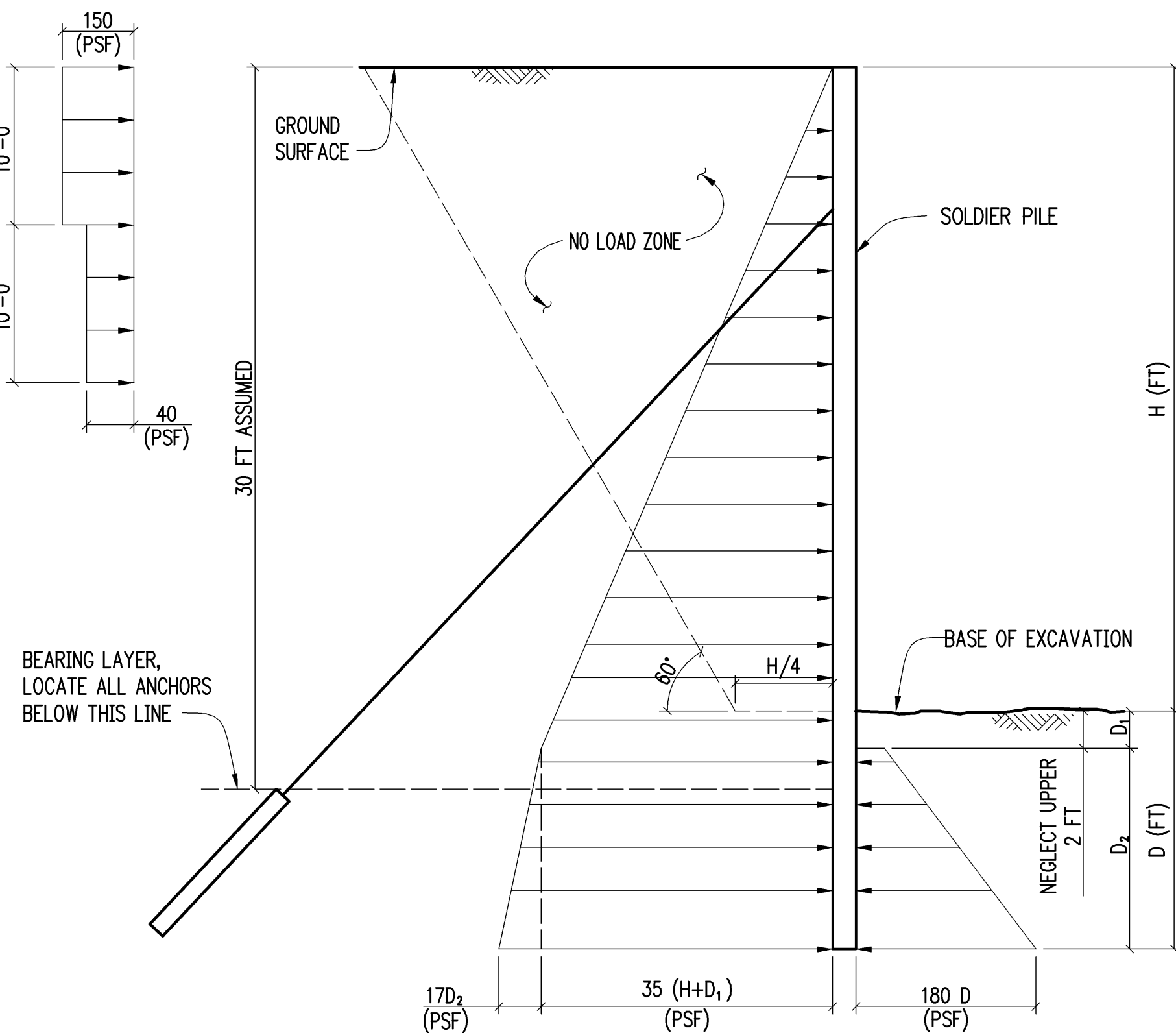
Steel bracing may be required during tieback stressing and testing to restrain the soldier piles from twisting. The locations and configuration of the bracing will be determined in the field at the time of construction. The cost to and install the bracing will be considered incidental.

SHORING MONITORING

Monitoring of the shoring system, conducted by the Contractor, shall include measurements of vertical and horizontal movements of each soldier pile as directed by the Geotechnical Engineer. Monitoring points shall be located at the top of the soldier piles, strategically located to facilitate easy measurement by the surveyor. Ground surface monitoring shall be established on hardscapes surrounding the site as directed by the Geotechnical Engineer. Monitoring points shall be established on all adjacent buildings and shall be monitored daily during active excavation. Acceptable settlements will depend on the sensitivity of the surface or subsurface structure, therefore, settlement criteria will be established by the Geotechnical Engineer during active excavation. Additional monitoring points may be established at the direction of the Geotechnical Engineer.

The measuring system used for shoring monitoring shall have an accuracy of at least 0.01 foot. All reference points on the existing ground surface shall be installed and read prior to commencing the excavation. Subsequent points at depth along the shoring wall shall be installed and read as soon as possible during excavation. All reference points shall be read prior to and during critical stages of construction. The frequency of readings will depend on the results of previous readings and the rate of construction. As a minimum, readings shall be taken twice a week throughout construction until the shoring walls are completed. Readings shall be taken once a week by a licensed land surveyor. More frequent readings may be required at critical times during construction or if deemed appropriate by the Geotechnical Engineer. All readings shall be submitted to the Engineer and Geotechnical Engineer for review. If movement is observed to be 1 inch or greater, construction of the shoring system shall stop. The contractor, Engineer and Geotechnical Engineer shall evaluate the cause of the movement and implement mitigation measures, if deemed appropriate.

EQUIVALENT SOIL SURCHARGE FOR MATERIALS, EQUIPMENT, VEHICLES, ETC.



DESIGN LATERAL SOIL PRESSURES
CANTILEVER OR SINGLE-SUPPORT TIEBACK

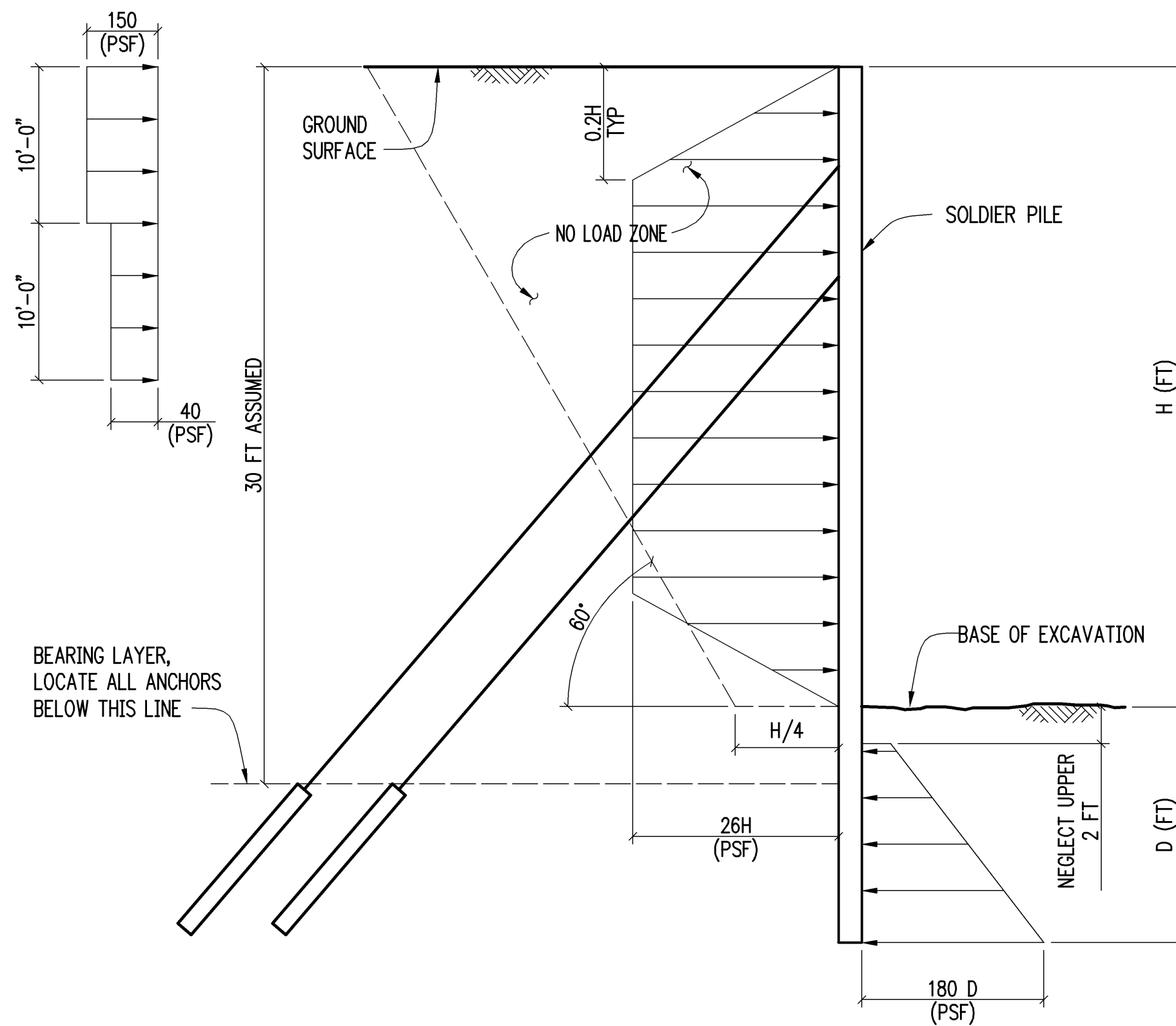
DESIGN PRESSURES

- Active pressure assumed to act over pile spacing above base of excavation and one pile diameter below base of excavation, for the north, south and east walls.
- Passive pressure assumed to act over twice the grouted soldier pile diameter, for the north, south and east walls.
- Air lifts in feet and pounds.
- Allowable soil friction between concrete and soil for shaft = 20 KSF in dense native soil.
- Allowable shaft end bearing = 15 KSF.
- Anchor lengths assume 4.0 KLF bond strength in anchor zone. The contractor shall select drilling methods and anchor size to achieve this capacity.
- Depth of dewatering assumed to be at bottom of excavation except at west wall.
- Design does not include hydrostatic pressures above assumed groundwater table.
- Lateral surcharge pressure is based on an assumed traffic surface surcharge of 300 psf acting over a 10 foot wide influence area, per the Geotechnical Report.
- Railroad surcharge = 1882 PSF over 6.5 foot width for piles at west wall.
- Bearing layer assumed to be 30 feet below ground surface based on information in the geotechnical report.

SHORING DRAWING ABBREVIATIONS

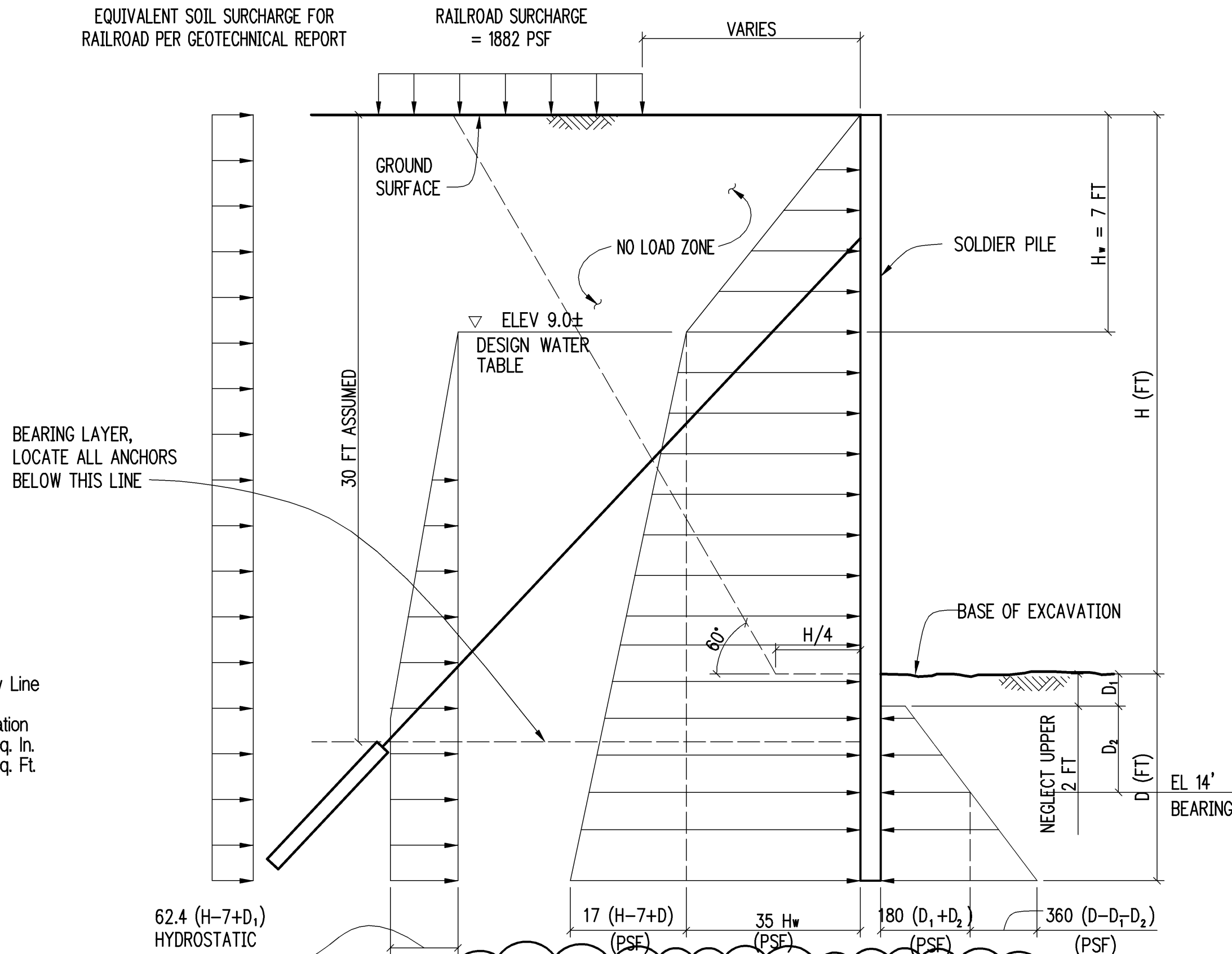
AB	Anchor Bolt	EW	Each Way	OPNG	Opening
ADDL	Additional	EXIST	Existing	OPP	Opposite
ADJ	Adjustable	EXP	Expansion	PEN	Penetration
AFF	Above Finish Floor	EXT	Exterior	PL	Plate, Property Line
ANCH	Anchor	FDN	Foundation	PNL	Panel
ARCH	Architectural	FF	Far Face	PP	Partial Penetration
BJ	Bottom of	FIN	Finish	PSI	Pounds Per Sq. In.
BLDG	Building	FLG	Flange	PSF	Pounds Per Sq. Ft.
BM	Beam	FLR	Floor	PT	Point
BOT	Bottom	FS	Far Side	R	Radius
BRG	Bearing	FT	Feet	REF	Reference
BTWN	Between	FTG	Footing	REINF	Reinforcing
CAP	Capacily	GS	Ground Surface	RECD	Required
CC	Center to Center	HK	Hook	RTN	Return
CIP	Cast in Place	HORIZ	Horizontal	SCHED	Schedule
CL	Centerline	HP	High Point	SECT	Section
CLR	Clear	ID	Inside Diameter	SHT	Sheet
COL	Column	IF	Inside Face	SIM	Similar
CONC	Concrete	IN	Inch	SPEC	Specification
CONN	Connection	JT	Joint	SQ	Square
CONST	Construction	K	Kip (1000 lbs.)	STD	Standard
CONT	Continuous	KSF	Kips Per Sq. Ft.	STL	Steel
CONTR	Contractor	KSI	Kips Per Sq. In.	STRUCT	Structural
COORD	Coordinate	LB	Pound	SUPP	Support
CP	Complete Penetration	LF	Lineal Foot	SYMM	Symmetrical
DBA	Deformed Bar Anchor	LL	Live Load	T/	Top of
DBL	Double	LLH	Long Leg Horizontal	T&B	Top and Bottom
DET	Detail	LLV	Long Leg Vertical	THK	Thickness
DIA	Diameter	LONG	Longitudinal	THRU	Through
DKG	Decking	LP	Low Point	TRANS	Transverse
DL	Dead Load	MAX	Maximum	TS	Structural Tube
DN	Down	MIN	Minimum	TYP	Typical
DO	Ditto	MISC	Miscellaneous	UBC	Uniform Building Code
DWG	Drawing	MOM	Moment	UNO	Unless Otherwise
DWL	Dowel	NF	Near Face	VERT	Vertical
EA	Each	NC	Not in Contact	W/	With
EE	Each End	NOM	Nominal	WD	Wood
EF	Each Face	N/A	Not Applicable	WF	Wide Flange
EL	Elevation	NS	Near Side, Nonshrink	W/O	Without
ELECT	Electrical	NTS	Not to Scale	WP	Work Point
EMBED	Embedment	OC	On Center	WT	Structural Tee
EQ	Equal	OD	Outside Diameter		
		OF	Outside Face		

EQUIVALENT SOIL SURCHARGE FOR MATERIALS, EQUIPMENT, VEHICLES, ETC.



DESIGN LATERAL SOIL PRESSURES
MULTIPLE TIEBACK ROWS

EQUIVALENT SOIL SURCHARGE FOR RAILROAD PER GEOTECHNICAL REPORT



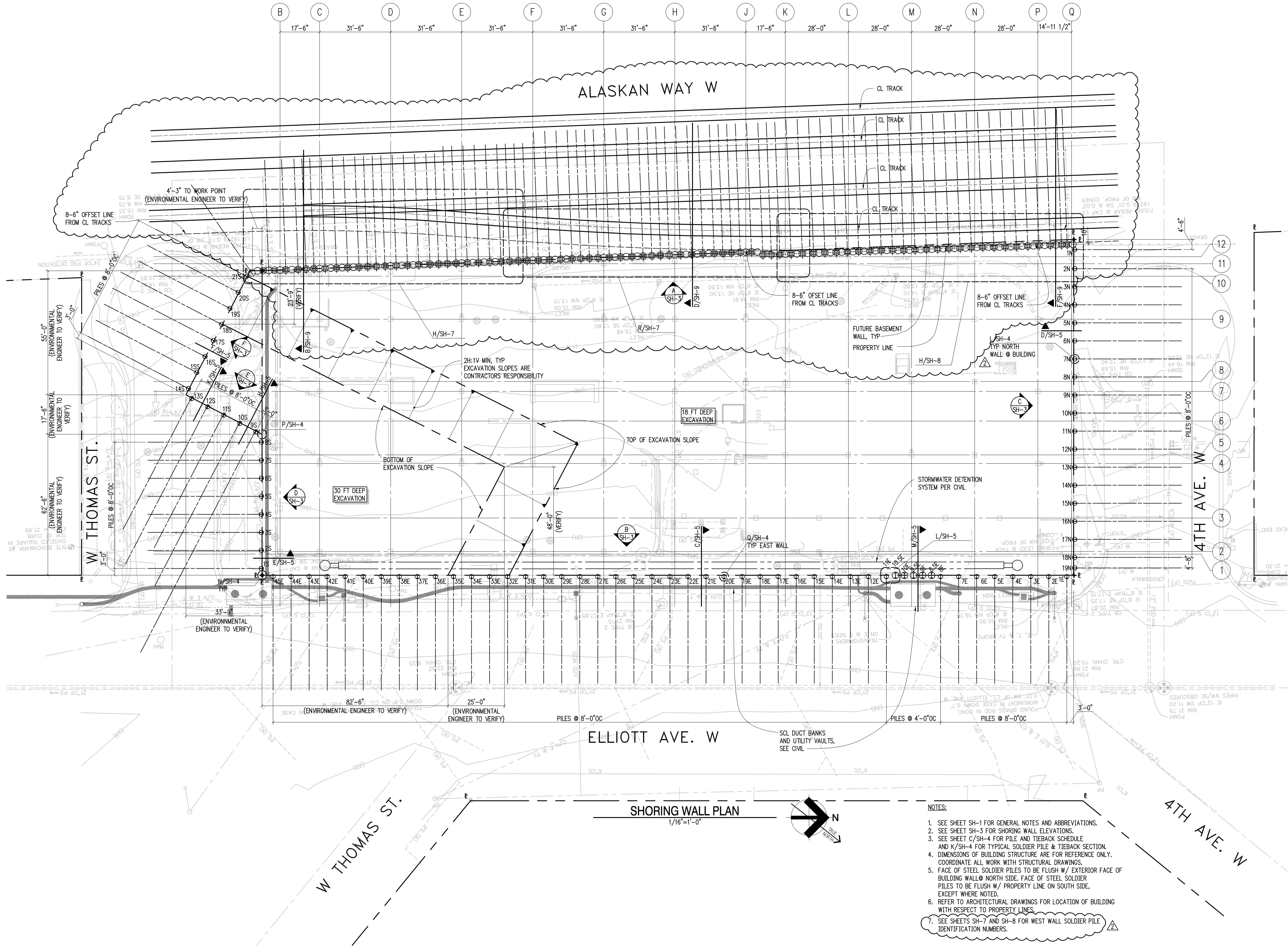
DESIGN LATERAL SOIL PRESSURES
WEST SHORING WALL

NOTES:

- Active pressure assumed to act over pile spacing above base of excavation and below base of excavation.
- passive pressure assumed to act over pile spacing.

DRAWING INDEX

SH-1	SHORING NOTES
SH-2	SHORING PLAN
SH-3	SHORING WALL ELEVATIONS
SH-4	SHORING DETAILS
SH-5	SHORING WALL SECTIONS AND DETAILS
SH-6	SHORING DETAILS
SH-7	SHORING DETAILS
SH-8	SHORING DETAILS
SH-9	SHORING WALL SECTIONS



- NOTES:
1. SEE SHEET SH-1 FOR GENERAL NOTES AND ABBREVIATIONS.
 2. SEE SHEET SH-3 FOR SHORING WALL ELEVATIONS.
 3. SEE SHEET C/SH-4 FOR PILE AND TIEBACK SCHEDULE AND K/SH-4 FOR TYPICAL SOLDIER PILE & TIEBACK SECTION.
 4. DIMENSIONS OF BUILDING STRUCTURE ARE FOR REFERENCE ONLY. COORDINATE ALL WORK WITH STRUCTURAL DRAWINGS.
 5. FACE OF STEEL SOLDIER PILES TO BE FLUSH W/ EXTERIOR FACE OF BUILDING WALL @ NORTH SIDE. FACE OF STEEL SOLDIER PILES TO BE FLUSH W/ PROPERTY LINE ON SOUTH SIDE, EXCEPT WHERE NOTED.
 6. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF BUILDING WITH RESPECT TO PROPERTY LINES.
 7. SEE SHEETS SH-7 AND SH-8 FOR WEST WALL SOLDIER PILE IDENTIFICATION NUMBERS.

NO.	REVISIONS	DATE
2	REVISED WEST WALL SHORING	4/26/06
1	REVISED BID SET	1/23/06
	BID SET	12/2/05
	SHORING PERMIT RESUBMITTAL	10/2/05
	SHORING PERMIT SUBMITTAL	6/8/05

DATE	SCALE	DRAWN BY	JOB NO.	DATE PLOTTED	DWG NAME
3/20/06					

Professional Engineer Seal for Curtis Beattie, State of Washington, License No. 14875, Expired 1/25/07.

NO.	REVISIONS	DATE

